

Solid State Devices, Inc.

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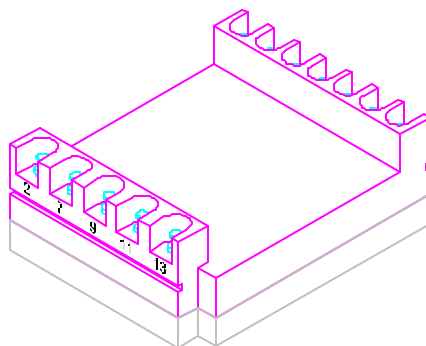
Designer's Data Sheet

FEATURES:

- 100kHz Operation
- Airborne Application up to 50,000 ft
- High Efficiency
- Low EMI / Corona Discharge
- Thermally Conductive Aluminum Base Plate
- Helicoil Mounting Inserts
- ESS Screening Available. Consult Factory.
- Exterior Surfaces Sandblasted to Promote Adhesion of Encapsulation in Subsequent Assembly

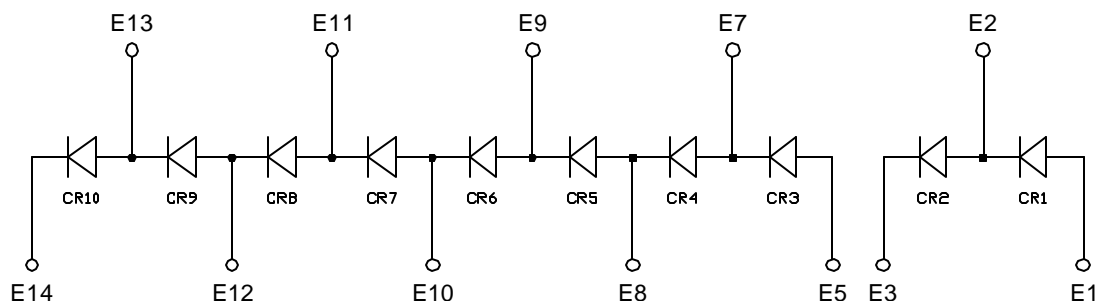
SPA548-01

HIGH VOLTAGE DIODE BRIDGE ASSEMBLY 5.5 kV / 2A



MAXIMUM RATINGS (Per Leg, Unless Otherwise Specified)	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	V_{RRM} V_R	2,000	Volts
Half Wave Rectified Forward Current Averaged Over Fully Cycle (Resistive Load, 60 Hz, Sine Wave, $T_C = 25^\circ\text{C}$)	I_O	2.0	Amps
Peak Surge Current ($T_C = 55^\circ\text{C}$, 8.3 ms Pulse, Superimposed on Rated Current at Rated Voltage)	I_{FSM}	20	Amps
Maximum Individual Partial Discharge ($V = 8\text{kV}$, $t = 1\text{min}$, All Terminals in Common to Base)		10	pC
Maximum Dielectric Voltage	V_{DIEL}	8,000	Volts
Operating Temperature Range (Base plate)	$T_{OP\ BASE}$	-45 to +100	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance (Per Diode) Junction to Case	R_{qJC}	15	$^\circ\text{C/W}$

Electrical Schematic



NOTE: All specifications are subject to change without notification.
SSD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: PM0022B

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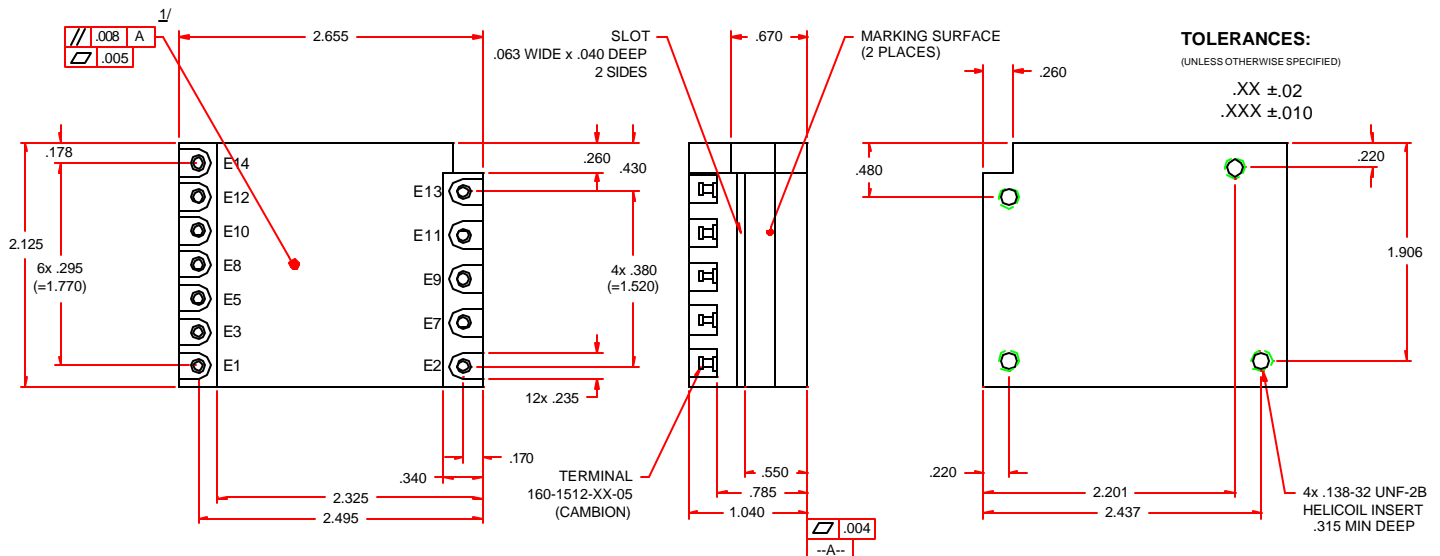
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ELECTRICAL CHARACTERISTICS (Per Leg)	Symbol	Max	Unit
Max Instantaneous Forward Voltage Drop ($I_F = 0.75 \text{ A}$, $T_C = 25^\circ\text{C}$, 300 μs Pulse)	V_F	6.0	V
Max Reverse Leakage Current ($V_R = 2\text{ kV}$, $T_C = 25^\circ\text{C}$)	I_{R1}	5	μA
Max Reverse Leakage Current ($V_R = 2\text{ kV}$, $T_C = 100^\circ\text{C}$)	I_{R2}	25	μA
Maximum Junction Capacitance ($f = 1 \text{ MHz}$, $V_R = 10 \text{ V}$, $T_C = 25^\circ\text{C}$)	C_J	20	pF
Maximum Pin to Ground Capacitance ($f = 1 \text{ MHz}$, $V_R = 100 \text{ V}$, $T_C = 25^\circ\text{C}$)	C_B	30	pF
Maximum Reverse Recovery Time ($I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{RR} = 0.25 \text{ A}$, $T_C = 25^\circ\text{C}$)	t_{RR}	35	nsec

NOTES:

- Maximum forward voltage measured with instantaneous forward pulse of 300 μsec minimum.
- For information on curves, contact the Factory Representative for Engineering Assistance

PACKAGE OUTLINE:**NOTE:**

- $\frac{1}{\text{A}}$ Specified Flatness and Parallelism applies to the area of 2.125 x 1.980" min.

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